Workforce Forecasting – Bottoms Up or Top Down?

Abstract *Alternate approaches to workforce forecasting are discussed, outlining where aggregate modeling is superior and where bottoms-up roll ups are preferred.*

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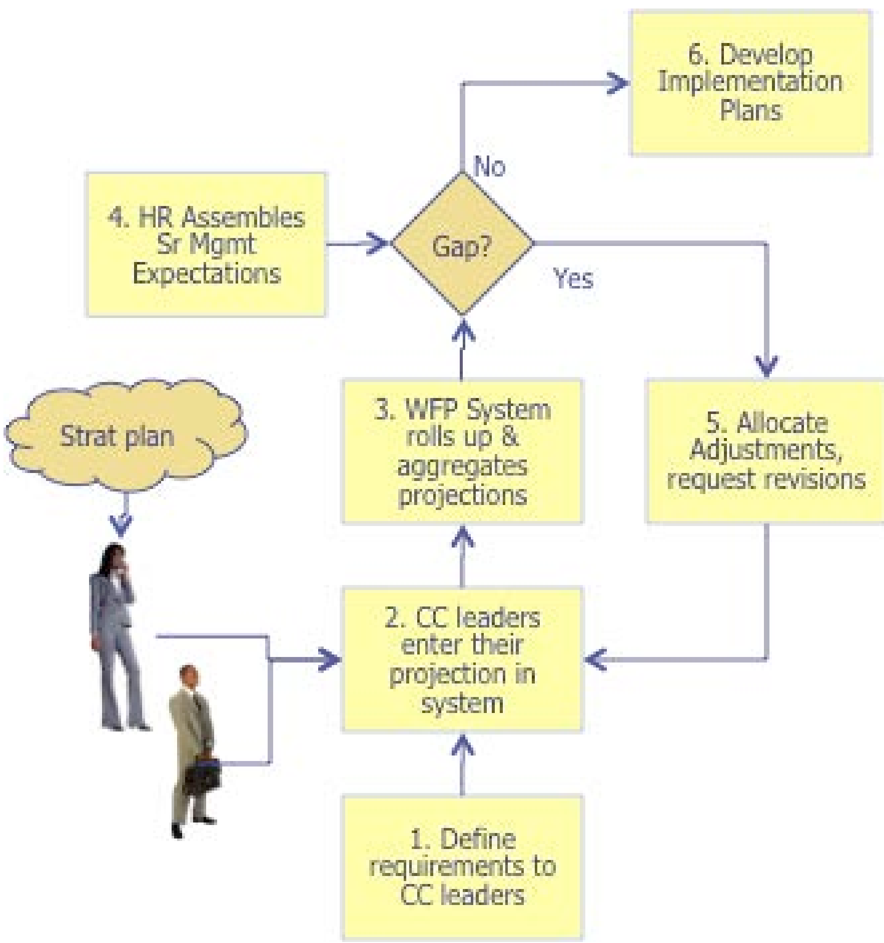
Workforce planning typically involves developing a forecast of staffing numbers required in the next one to ten years (in our practice, five-year forecasts are most common). Two approaches are commonly used, we call them bottoms up and top down. What is the difference and what are the advantages and disadvantages of the two?

Bottoms Up

A bottoms-up or "Bookkeeping" approach is based on individual leaders or cost centre managers developing forecasts for their department.



Bottoms Up or Bookkeeping

"Individual managers forecast requirements for their staffing needs. HR aggregates the individual forecasts into an overall business unit forecast."

Top Down or Engineering

"A mathematical model with explicit assumptions is used to generate forecasts"

The above diagram outlines the methodology. It typically includes some variation of the following steps:

1. HR outlines requirements to Cost centre leaders. Spreadsheets or forms for data entry are provided. In some cases, the company's HRIS system can be used
2. Cost centre leaders estimate their staffing requirements for the next year or two. They base this on their interpretation of company strategy, business structure, technology changes, etc. Cost centre leaders would generate assumptions on attrition or turnover.
3. Cost centre forecasts are collected and aggregated, typically into a Workforce Planning System (database, spreadsheets). This creates an overall business unit forecast.
4. HR has collected inputs from Senior Management. They have a feel for what reasonable or "affordable" staffing values might be. The aggregate numbers are subjected to a "reasonableness test." At this stage, one typically finds that conservatism by cost centre leaders results in staffing forecasts deemed too high.
5. If the aggregate numbers are not accepted, an iterative process of adjustments and reallocation typically results in an acceptable compromise forecast.
6. The accepted forecast is used for implementation planning (e.g. develop recruiting strategies).

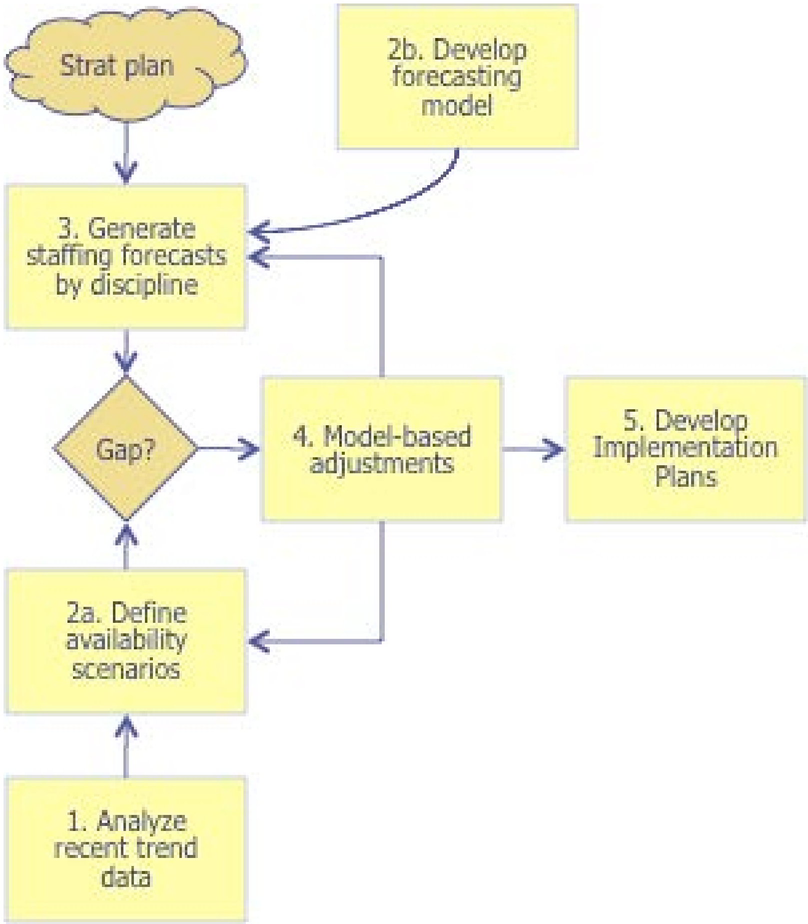
"Bottoms up approaches typically require several iterations to arrive at acceptable forecasts.

Top Down approaches require a model"

Top Down

A top-down or "Engineering" approach uses a business model to generate workforce forecasts. This is outlined in a diagram below. The typical steps are as follows:

1. Recent trends in hiring, demographics and turnover are analysed. These will form the basis for turnover assumptions used in the forecasts.
2. At this stage, there are two concurrent activities: (a) Several scenarios are defined for availability of employees (e.g. a high turnover, tight labour market scenario vs. a low turnover scenario); (b) a project team develops a forecasting model (if this doesn't already exist from prior years). Key managers or subject matter experts contribute productivity assumptions.
3. Using growth and activity forecasts from a strategic plan, the model is used to generate staffing forecasts.
4. Alternate scenarios and strategies are analysed through model adjustments.
5. Implementation plans are developed for the accepted strategy.



There are a number of advantages and disadvantages for the two approaches. The details are outlined in a table below. However, the key differences are:

Bottoms-up is a good approach for short term forecasting and budgeting (one quarter to one year out). Over this time frame, there are unlikely to be major, strategic changes and cost centre leaders have a good handle on their requirements.

Top Down is preferable for longer term forecasting (beyond one year). It should be used if the company wishes to examine alternate HR strategies or review longer-term trends in turnover, productivity and resourcing.

A detailed review of pros and cons of the two approaches is presented in the table below.

"Bottoms Up is good for short-term forecasting (one year or less). Top Down is preferable for longer-term forecasts or strategy development"

	Pro	Con
Bottoms Up "Bookkeeping"	• Good for short-term forecasts • Gets leaders engaged • Avoid complex business models • Integrates well with HRIS	• Complex transaction system (many roll-ups) • Difficult to ensure consistency in assumptions • Assumptions are not transparent • Output is hard to validate • High demand on leaders' time • Unreliable beyond one year (leaders do not see big picture) • Difficult to do alternate scenarios • Cannot handle major changes in strategies
Top Down "Engineering"	• Good for longer-term forecasts • Low demand on leaders • Realistic link to business strategy • Easy to evaluate alternate strategies • Transparent logic and assumptions • More consistent with business strategic planning	• Complex model required • Hard to maintain in house (modelling skills in HR groups)

Dynawise is a management consulting firm focused on Business Process Management, Change Management and Workforce Planning. Services include the design and implementation of programs and processes. Consultants have in-depth experience in Human Resource Management, Strategy, Business Process Management, Project Management and Change Management.

Dynawise differentiates itself through a rigorous, structured approach to workforce analysis, forecasting and strategy development.

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